DOCUMENT RESUME

ED 075 970 EC 051 775

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TITLE Non-Verbal Communication in Retarded Pupils.
PUB DATE Feb 73
NOTE 9p.; A paper presented at the American Educational Research Association (New Orleans, Louisiana, February 25-March 1, 1973)

EDRS PRICE MF-$0.65 HC-$3.29
DESCRIPTORS *Educable Mentally Handicapped; *Exceptional Child Research; *Interpersonal Relationship; Mentally Handicapped; Nonverbal Communication; Racial Factors; *Spatial Relationship; Student Teacher Relationship; *Trainable Mentally Handicapped

ABSTRACT

Thirty educable mentally retarded (EMR) and 20 trainable mentally retarded (TMR) black or white pupils were observed interacting with classmates and 25 teachers in a retardation center. Multi-modal communicative behavior was noted, with focus on interpersonal spatial distance as one index of relationship and affect between interacting partners. Empirical data collected on 1,400 dyads with the use of the Dennis Infracommunication Analysis Device showed that EMR pupils and TMR pupils communicate with their classmates at the same mean distance. In across race pupil/pupil dyads, the white pupils set the distance. White pupils also maintained closer distance with each other than did black pupils. TMR pupils interacted with their teachers at closer range than with other TMR pupils, though EMR pupils interacted at moreintimate distances with other EMR pupils than with their teachers. Other factors bearing on non-verbal communication appeared to be angle of orientation, gaze, kinesics, and kinesthetics. (Author/DB)

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# Non-Verbal Communication in Retarded Pupils[1]

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## Abstract

Thirty EMR and twenty TMR pupils were observed interacting with classmates and 25 teachers in a Retardation Center. Multi-modal communicative behavior was noted, with focus on interpersonal spatial distance as one index of relationship and affect between interacting partners. Empirical data collected on 1,400 dyads with the use of the DIAD showed that EMR pupils and TMR pupils communicate with their classmates at the same mean distance. TMR pupils interact with their teachers at closer range than with other TMR pupils, and EMR pupils interact at more intimate distances with other EMR pupils than with their teachers. Differences by sex and race are also presented. Data discussed include mutual angle of orientation, gaze, kinesics, and kinesthetics.

## Introduction

The present study is one of a series of proxemic studies made using the Dennis Infracommunication Analysis Device (DIAD) (Dennis, 1971) in natural, academic & laboratory settings, and focuses on mentally retarded pupils interacting in dyads with each other and with their adult instructors in a Retardation Center. The research is descriptive, examining selected spatial aspects of the communication modes of EMR and TMR children.

Several investigations have centered on distance and gaze of normal subjects interacting dyadically in laboratory situations, some on normal subjects in natural and academic settings and one using as subjects patients subjected to territorial invasion in a mental hospital (Argyle, & Dean, 1965; Baxter, 1970; Felipe & Sommer, 1966).

Kirk (1962) states that there are no basic social traits which differentiate the educable mentally retarded from the average child. But are the patterns of social behavior exhibited by EMR children different from those of TMR children? Interpersonal spatial distance between interacting individuals is culturally determined, and is correlated with the social relationship or degree of intimacy between the participants (Argyle, & Dean, 1965; Hall, 1966). The question is, do EMR pupils interact dyadically with classmates and teaching staff, across and within race and sex differently than do TMR pupils?

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[1]Paper presented at the Meetings of the American Educational Research Association, New Orleans, 1973.

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## Procedures

Subjects were 50 Black and white, male and female residential students and day students, and 25 Black and white, male and female adult instructors. Observations were made in the summer, during morning and afternoon hours, for a period of several weeks. Data was collected in observation rooms overlooking classrooms. Observations of 1,400 dyads were made using the Dennis Infracommunication Analysis Device (DIAD) for observation, classification, recording and analysis of behavior. Mean class sizes were 9 for EMR, 6 for TMR. The primary TMR class had no Black male pupils. There were no Black male teachers. There were four teachers in each classroom; in each level (EMR or TMR), there was one Primary, one Intermediate, and one Adolescent class.

Randomly entering an observation room overlooking an area containing known levels of pupils, the observer scanned from right to left, selecting interacting dyads. Thus if several dyads were interacting simultaneously, only one was observed. After noting all data, the observer attended to the next interacting dyad to the left of the first; if the spatial scan ended at the left, the process was repeated. Data collection for each dyad occupied up to five seconds.

Since the purpose of the study was to do an initial, exploratory examination, levels were collapsed, and comparisons made between EMR and TMR dyads of pupils only, and of pupils and teachers. Data on dyadic interaction presented here are those of distance, mutual angle of orientation, gaze, kinesics, and kinesthetics. Ss were classified as to EMR/TMR, Teacher/Pupil, M/F, and B/W.

The distance measure (collected in feet/inches) was done by the observer who had previously demonstrated reliabilities above .90 in other settings. Simply, she wrote down the distance between the Ss in a dyad of the closest portions of their bodies. Thus, touch was recorded as zero distance. Distance is not a direct measure of intimacy of communication, since closeness at a large angle, or without eye contact, is less intimate than interaction at a greater distance with face to face eye contact. The size of the sample precludes analysis of all data simultaneously, so the variables are presented separately, starting with distance.

## Results

Figures 1 through 4 give the mean interpersonal spatial distances in cm. for EMR pupil-Teacher, EMR pupil-pupil, TMR pupil-Teacher, and TMR pupil-pupil dyads.

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Insert Figures 1-4 About Here

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| | | TEACHER | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | BLACK | | | | WHITE | | | |
| | | Male | | Female | | Male | | Female | |
| | | n | M | n | M | n | M | n | M |
| PUPIL | BLACK Male | 0 | 0 | 1 | 0 = | 35 | 7.9 I | 47 | 4.1 I |
| | BLACK Female | 0 | 0 | 7 | 2.5 X | 12 | 16.2 I | 8 | 12.4 = |
| | WHITE Male | 0 | 0 | 2 | 152.4 I | 31 | 6.7 = | 61 | 20.3 I |
| | WHITE Female | 0 | 0 | 4 | 6.3 I | 17 | 26.4 I | 40 | 267.1 I |

Figure 1. Teacher-pupil angles and distances (in cm.), EMR classes; "i" - intimate angles, "=" - balanced, "X" - non-intimate angles.

| | | PUPIL | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | BLACK | | | | WHITE | | | |
| | | Male | | Female | | Male | | Female | |
| | | n | M | n | M | n | M | n | M |
| PUPIL | BLACK Male | 31 | 29.0 X | | | | | | |
| | BLACK Female | 25 | 32.7 = | 27 | 43.4 = | | | | |
| | WHITE Male | 43 | 7.62 X | 32 | 12.9 X | 10 | 6.6 I | | |
| | WHITE Female | 16 | 4.5 X | 20 | 5.0 = | 25 | 11.2 I | 5 | 6.6 I |

Figure 2. Pupil-pupil angles and distances (in cm.), EMR classes; "I" - intimate angles, "=" - balanced, "X" - non-intimate angles.

| | | TEACHER | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | BLACK | | | | WHITE | | | |
| | | Male | | Female | | Male | | Female | |
| | | n | M | n | M | n | M | n | M |
| PUPIL | Male BLACK | 0 | 0 | 10 | 16.3 X | 0 | 0 | 16 | 15.8 X |
| | Female BLACK | 0 | 0 | 36 | 4.4 = | 42 | 7.6 X | 81 | 8.3 = |
| | Male WHITE | 0 | 0 | 23 | 18.4 X | 35 | 7.9 I | 78 | 10.4 = |
| | Female WHITE | 0 | 0 | 39 | 3.8 X | 9 | 32.1 = | 69 | 11.1 I |

Figure 3. Teacher-pupil angles and distances (in cm.), TMR classes; "I" - intimate angles, "=" - balanced, "X" - non-intimate angles.

| | | PUPIL | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | BLACK | | | | WHITE | | | |
| | | Male | | Female | | Male | | Female | |
| | | n | M | n | M | n | M | n | M |
| PUPIL | Male BLACK | 6 | 14.4 X | | | | | | |
| | Female BLACK | 16 | 27.3 X | 13 | 38.4 I | | | | |
| | Male WHITE | 12 | 26.8 X | 33 | 13.5 X | 4 | 11.4 = | | |
| | Female WHITE | 8 | 21.6 X | 37 | 14.3 X | 24 | 10.5 = | 3 | 13.5 X |

Figure 4. Pupil-pupil angles and distances (in cm.), TMR classes; "I" - intimate angles, "=" - balanced, "X" - non-intimate angles.

Overall, TMR and EMR pupil-pupil distances are both 18 cm. There are some interesting differences which tend to answer the question posed; one is that teacher-pupil distance is 10 cm. for TMR, but 45 cm. for EMR teacher-pupil dyads. The latter result can be interpreted to reflect instructors' use of tactile modes of instruction with the less-verbal TMR pupils.

Figures 2 and 4 show that Black-Black dyads are father apart than are White-White dyads; this is in accord with Baxter (1970) who found the same thing in an informal, outdoor setting.

The across-race data are difficult to interpret due to small 'n' in the Teacher-Pupil dyads (Figures 1 & 3), but the pupil-pupil 'n' is substantial. In the EMR classes, contrary to John Dollard's oft-quoted statement about the salience of Black male-white female dyads in the South, this dyad was the most intimate as to distance. In the TMRs, however, the Black females were closer to whites than were the males (Figure 4), but the Black-white across sex differences were reversed.

The angle between members of a dyad was recorded; this was the angle obtained between the torso of one and the torso of another. Categories of angles ranged from 0 for 0°, 1 for 45°, 2 for 90°, through 8, back to back, and 9, front to back. For this paper, categories 0, 1 and 2 are labeled intimate, 3 through 9 non-intimate. Figures 1-4 show which types of dyads had more intimate (I) than non-intimate (X) angles; the "=" shows that equal numbers of dyads (± 10%) were intimate or non-intimate.

Rather than being negatively correlated to distance, in the Teacher-pupil dyads, intimacy seemingly has to do with race. The white-white pupil-Teacher dyads are generally intimate in both EMR (Figure 1) and TMR (Figure 3) classes. In the across-race dyads of pupil and Teacher, the findings are generally that Teachers are intimate with EMR pupils but less intimate with TMRs. The Black-Black dyads are not as intimate as the white-white.

Pupil-pupil dyads (Figures 2 and 4) generally followed racial pairing patterns of intimacy. The EMR white-Black, and especially the TMRs, were non-intimate. The white-white EMRs were the most intimate; most dyads with Black males were non-intimate. In the TMRs, only Black-Black females were more intimate than not, whereas in the EMR, as has been pointed out, whites interacted intimately with whites.

Data on gaze, necessitating a table 6 x 6 x 12, are presented without tables. The categories ranged from 1 - gazing into eyes, 2 - gazing at face to 6 - not looking at dyadic partner. Considering only pupils, the TMR Black females were most intimate (gaze at face, eyes, or body) with each other, while in EMR it was the white females. In general, Females with Females were more intimate than Males with Males; mixed sexes were least intimate. Except for Female/Female, blacks were less intimate than whites.

In the Teacher-pupil dyads, for same race and sex, Teachers were more confrontive (intimate) than pupils; else, pupils averted their gaze. This was true in both TMR and EMR classes. White pupils averted from Black teachers, Black pupils averted from white teachers.

The kinesics categories - smile, frown, nod, gesture, were infrequently used. The only noticeable difference in the sparse data was that teachers smile more than pupils, and only one smile (of 19) was across both race and sex.

The kinesthetic categories (1 - hold & caress, 2 - caress, 3 - hold, 4 - contact, 5 - brush, 6 - touch, etc.) were seldom used; so the data thus cannot be used to reach any conclusions. The largest incidences were 8 times an EMR pupil held a teacher, 11 times a TMR teacher held a pupil.

## Summary

EMR-TMR Differences. There was no overall difference in distance between interacting pupils. Teachers of TMR were closer than EMR teachers were to pupils. TMR pupils were less intimate with each other according to the angle data than were EMR pupils; the same obtained for teachers and pupils. Gaze of eyes produced no overall differences between EMR and TMR pupils and their teachers; the sparse kinesic and kinesthetic data produce only suggestive differences.

Race Differences. Black pupils, both EMR and TMR maintained greater space between them than did white pupils. Black/white dyads were closer to white-white means than to Black/Black means for distance between pupils. Black teachers with Black pupils were probably closer than were white teachers to white pupils in EMR but not in Female Teacher/Male pupil in the TMR classes. In angle to each other, white pupils were probably more intimate with each other than were black pupils; white teachers had more intimate angles with pupils than did the Black teachers. In terms of gaze direction, Blacks were less intimate, i.e., averted more than whites; with teachers, across-race conditions produced aversion by the pupil.

Sex Differences. There are no overall Pupil/Pupil sex differences within race in distance, but in intimacy of angle Females are more confrontive than males; the latter was also true in eye contact (gaze). In the Teacher-pupil interactions, there are no overall differences by sex in distance, mixed data on angles, eye direction data are unclear, as are kinesics and kinesthetics.

## Discussion

This study is descriptive and suggestive rather than difinitive. We have discerned a number of differences in behavior between EMR and TMR children (with different teachers) when sex and race are considered. There are also some differences across race, across sex, and more complex differences.

The complete analysis, simultaneously, of all variables and levels of behavior would have taken more computer capability than is available; approximately 1,200K. This points up the difficulty in analysis of complex behavior patterns.

It is traditional to call for further research; the message of this paper is that such work is necessary, possible, and realistic in that interpretable idfferences do occur. Probably the most fascinating finding is the one suggesting, in across-race pupil/pupil dyads, that the white pupils, who maintain closer distance with each other than do Black pupils, set the distance in Black-white interactions. If, as we know, too much intimacy (closeness) is upsetting, we can then interpret the angle data to show that white white pupils control social distance, Blacks control the angle at which they interact, preserving themselves. One other finding, that of pupils averting gaze from across-race teachers, is suggestive of the need for further study of basic interpersonal dynamics as well. So now lets look at non-verbal behavior as well as verbal.

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